

In the claims:

50. (Previously added) A UPS system for providing backup power to a load, the system comprising:

a power input;

a plurality of batteries;

a plurality of battery housings, each containing one of the batteries, the batteries being coupled in parallel;

a plurality of battery-monitor processors, each monitor being disposed in a respective one of the battery housings and coupled to the corresponding battery;

a UPS processor coupled, and configured, to receive monitor data from the plurality of battery-monitor processors;

a UPS-processor housing containing the UPS processor and being displaced from the plurality of battery housings; and

a power output coupled and configured to selectively provide power from one of the power input and the plurality of batteries.

51. (Previously added) The system of claim 50 wherein the plurality of battery-monitor processors are coupled in series.

52. (Previously added) The system of claim 51 wherein the plurality of battery-monitor processors includes at least first and second battery-monitor processors coupled in series, the first battery-monitor processor coupled and configured to transfer commands received from the UPS processor to the second battery-monitor processor and to transfer monitor data received from the second battery-monitor processor to the UPS processor.

53. (Previously added) The system of claim 52 wherein the plurality of battery-monitor processors further includes at least a third battery-monitor processor coupled in series with the first and second battery-monitor processors, the second battery-

monitor processor coupled and configured to transfer commands received from the first battery-monitor processor to the third battery-monitor processor and to transfer monitor data received from the third battery-monitor processor to the first battery-monitor processor.

54. (Previously added) The system of claim 50 wherein each of the plurality of batteries comprises a battery pack comprising a plurality of series-coupled batteries.

55. (Previously added) The system of claim 54 wherein each battery pack comprises four series-coupled batteries.

56. (Previously added) The system of claim 55 wherein each battery of each battery pack is an approximately 12-volt battery.

57. (Previously added) The system of claim 54 wherein each battery pack includes a respective service indicator configured to indicate a status of the associated battery pack, and wherein each respective battery-monitor processor is coupled to the service indicator of the respective battery pack and configured to actuate the service indicator of the respective battery pack in accordance with data associated with the respective battery pack determined by the respective battery-monitor processor.

58. (Previously added) The system of claim 50 wherein the battery-monitor processors are configured to determine the monitor data from charging currents, discharging currents, and voltages associated with corresponding batteries.

59. (Previously added) The system of claim 50 wherein the UPS processor is configured to process the monitor data to determine a number of batteries that are at least one of being charged, at a float voltage, at an overtemperature, and that are substantially fully capable of delivering power to the load.

60. (Previously added) The system of claim 50 wherein the UPS processor is configured to determine a number of batteries for which service is desirable.

61. (Previously added) A UPS system for providing backup power to a load, the system comprising:

- a power input;

- a UPS processor;

- a UPS-processor housing containing the UPS processor;

- a plurality of battery packs coupled in parallel, each battery pack including a plurality of series-coupled batteries;

- a plurality of battery-pack housings each containing a respective one of the battery packs and each being separate from the UPS-processor housing;

- a plurality battery-pack monitor means disposed in respective ones of the battery-pack housings, the plurality of monitor means being daisy-chain coupled to each other and coupled to respective ones of the battery packs for monitoring battery pack information, processing the battery pack information, and transferring processed battery pack information toward the UPS processor; and

- a power output coupled and configured to selectively provide power from one of the power input and the plurality of battery packs;

wherein the UPS processor is coupled and configured to receive and further process the processed battery pack information to determine characteristics associated with the battery packs.

62. (Previously added) The system of claim 61 further comprising a first input and a first output coupled to each monitor means, wherein each monitor means is for transferring commands received on the respective first input to the respective first output that is connected to a monitor means disposed downstream from the respective monitor means relative to the UPS processor, and for transferring processed battery pack information received from the monitor means disposed downstream on a second input to a second output.

63. (Previously added) The system of claim 62 wherein the commands comprise clock signals and wherein the monitor means are each configured to transfer a first bit of processed battery pack information into the second input and a second bit of processed battery pack information out of the second output in response to receiving one of the clock signals on the first input.

64. (Previously added) The system of claim 63 wherein the UPS processor is configured to send the clock signals to the plurality of monitor means until the UPS processor stops receiving processed battery pack information.

65. (Previously added) A power source for use in a UPS system, the power source comprising:

- a housing;

- a plurality of batteries contained by the housing and coupled in series;

- an upstream input configured to couple to an upstream output of a first other power source;

- an upstream output configured to couple to at least one of an upstream input of a second other power source and an input of a UPS processor external to the power source;

- a downstream input configured to couple to at least one of an output of the UPS processor and a downstream output of the second other power source;

- a downstream output configured to couple to a downstream input of the first other power source; and

- a battery monitor processor coupled to the batteries and to the upstream input, the upstream output, the downstream input, and the downstream output, and configured to obtain first data associated with operation of the batteries, to process the first data into second data comprising multiple bits, and to transfer the bits to the upstream output.

66. (Previously added) The power source of claim 65 wherein the battery monitor processor is configured to transfer a first bit of information, the first bit being one of a bit of the second data and a bit of processed battery data received from the first other power source, to the upstream output and to accept a second bit of information on

the upstream input from the first other power source in response to receiving a signal on the downstream input.

67. (Previously added) The power source of claim 66 wherein the battery monitor processor is configured to transfer the signal received on the downstream input to the downstream output.

68. (Previously added) A method of determining information regarding a plurality of battery packs of a UPS system, the UPS system including a UPS processor, the method comprising:

monitoring data associated with each of the battery packs;

processing the monitored data in a plurality of battery-pack processors corresponding to the plurality of battery packs to determine a data word for each of the battery packs, the data words being indicative of operational status of the battery packs, the battery-pack processors being serially coupled to the UPS processor; and

transferring the data words from each of the battery-pack processors toward the UPS processor via any intervening battery-pack processors.

69. (Previously added) The method of claim 68 further comprising transferring command signals from the UPS processor to each of the battery-pack processors via any intervening battery-pack processors.

70. (Previously added) The method of claim 69 wherein transferring the data words occurs at each battery-pack processor in response to receiving the command signals.

71. (Previously added) The method of claim 70 wherein transferring the data words comprises transferring one bit of each of the words for each command signal received, respectively.

72. (Previously added) The method of claim 69 wherein the command signals are clock signals.

73. (New) An uninterruptible power supply system for providing backup power to a load, the system comprising:

- a power input configured to receive power;
- a plurality of batteries coupled in parallel and coupled to be charged by the power received by the power input while the power input receives power;
- a first processor disposed separately from the batteries in a main processor housing;
- a plurality of second processors each coupled to the first processor and at least one of the batteries, each of the second processors being configured and coupled to monitor the at least one of the batteries and to collect battery information regarding the at least one of the batteries; and
- a power output coupled and configured to provide power from at least one of the power input and the batteries to a load;

wherein at least one of the first processor and the second processors is configured to provide an indication regarding the battery information, the first processor being configured to receive the battery information from at least a selected one of the second processors.

74. (New) The system of claim 73 wherein each of the second processors is physically coupled to one of the batteries to form a plurality of processor-battery pairs each disposed within a battery module housing.

75. (New) The system of claim 73 wherein the battery information is indicative of at least one characteristic of the corresponding battery, the at least one characteristic being at least one of: an amount of capacity, a temperature, an indication that the battery should be replaced, an indication regarding the battery's ability to be charged, an indication of whether the battery is at a float voltage, and an indication of whether the battery is capable of providing sufficient power to drive the load.

76. (New) The system of claim 73 wherein the indication at least one of: is configured to actuate a light emitting diode, is configured to actuate an audio device, is configured to cause an icon to be shown on a first display, is configured to cause a message to be shown on a second display, and comprises a packet of information.